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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,773	03/31/2004	Joseph Deuringer	P04,0119	5205

7590 12/12/2005

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EXAMINER

YUN, JURIE

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/813,773

Applicant(s)

DEURINGER ET AL.

Examiner

Jurie Yun

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed 10/6/05 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. The terms "for use with" and "adapted for" recite intended use and do not convey any structural limitations. It has been held that the recitation that an element is "adapted for" to perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchinson, 69 USPQ 138.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

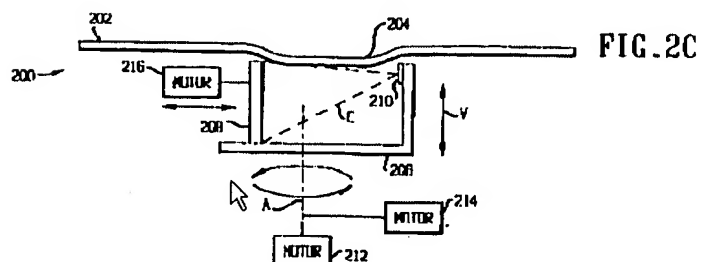
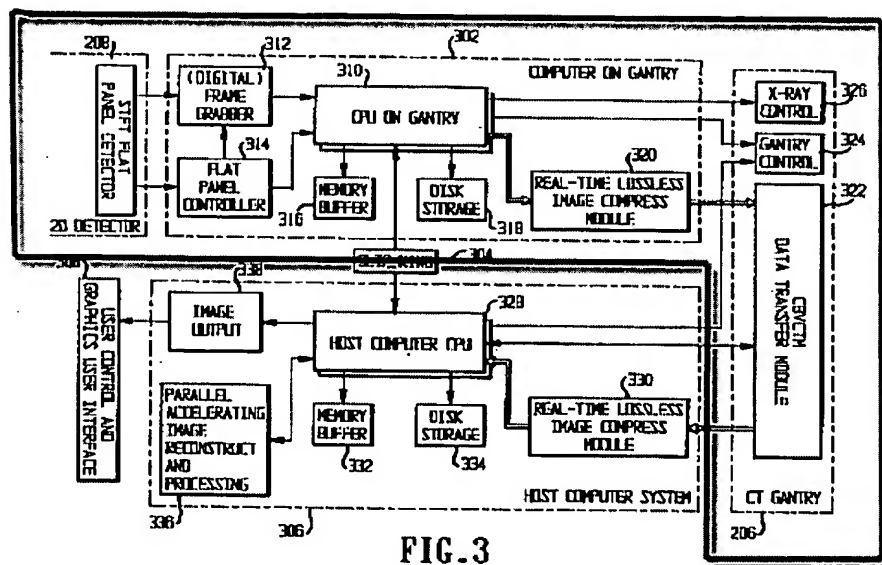
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Ning (USPN 6,480,565 B1).
6. With respect to claim 1, Ning discloses an apparatus for generating x-rays for use with a peripheral device containing a process computer, said apparatus comprising: a single structural unit (gantry, 206) having a housing containing all of a plurality of components operable in combination for generating x-rays, including an x-ray tube

Art Unit: 2882

(210) and a digital control, regulation and storage unit (items within outlined area in Fig. 3), said digital control, regulation and storage unit being connected to all of said components, including being connected to said x-ray tube for controlling operation of said x-ray tube; and said digital control, regulation and storage unit having an interface (slip ring, 304), accessible at said structural unit, adapted for connection to said process computer (328), said interface forming a single interface to said process computer for all of the components in said structural unit.



Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ning (USPN 6,480,565 B1) as applied to claim 1 above, and further in view of Rick et al. (USPN 6,714,621 B2).

9. With respect to claim 2, Ning does not disclose specifics of the x-ray tube. Rick et al. disclose an x-ray tube with a cathode (column 3, lines 45-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made that the x-ray tube of Ning includes a cathode, because this is a common element of x-ray tubes, as taught by Rick et al. Rick et al. are silent as to a heater current source connected to the cathode for heating said cathode. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the x-ray tube includes a heater current source connected to the cathode for heating the cathode, to produce x-rays.

10. With respect to claim 9, Ning does not disclose a high voltage generator connected to the x-ray tube for supplying high voltage to the x-ray tube for operating the x-ray tube. Rick et al. teach this (column 4, lines 3-4). It would have been obvious to one of ordinary skill in the art at the time the invention was made that the Ning x-ray tube includes a high voltage generator connected to it for supplying high voltage to the

Art Unit: 2882

x-ray tube, because this is necessary for operating the x-ray tube, as taught by Rick et al.

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ning (USPN 6,480,565 B1) as applied to claim 1 above, and further in view of Richardson et al. (USPN 6,519,317 B2).

12. With respect to claim 3, Ning does not disclose a cooling unit associated with said x-ray tube for circulating a coolant for cooling the x-ray tube, and a sensor for sensing at least one of a pressure and a temperature of said coolant. Richardson et al. disclose a sensor for sensing pressure of the x-ray tube coolant (column 8, lines 20-27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a cooling unit and a pressure and/or temperature sensing means in Ning, as taught by Richardson et al., to ensure sufficient cooling/pressure of the x-ray tube, which would result in longer life of the x-ray tube.

13. Claims 4, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ning (USPN 6,480,565 B1) as applied to claim 1 above, and further in view of Daniels et al. (USPN 4,160,906).

14. With respect to claim 4, Ning does not disclose the digital control, regulation and storage unit contains a program, and operates according to said program, for determining acceptability of a load on said x-ray tube requested by a user. Daniels et al. disclose a program for determining acceptability of a load on an x-ray tube requested

Art Unit: 2882

by a user (column 4, lines 17+ & column 9, line 50 – column 10, line 27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a program for determining acceptability of a load on said x-ray tube requested by a user in the Ning device, as taught by Daniels et al., to prevent x-ray tube failure and to promote longer x-ray tube life.

15. With respect to claim 6, Ning does not disclose the digital control, regulation and storage unit contains a program, and operates according to said program to store accumulated operating data associated with operation of said x-ray tube. Daniels et al. disclose this (column 10, lines 28+). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a program in Ning to store accumulated operating data associated with operation of the x-ray tube, to enable monitoring data of the x-ray tube, which would promote longer x-ray tube life.

16. With respect to claim 8, Ning does not specifically disclose the digital control, regulation and storage unit contains a program for monitoring operating of the plurality of components, including monitoring operating of the x-ray tube. Daniels et al. disclose a program for monitoring operating of the plurality of components, including monitoring operating of the x-ray tube (column 10, lines 28+). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a program in Ning, for monitoring operating of the plurality of components, including monitoring operating of the x-ray tube, to promote longer x-ray tube life.

Art Unit: 2882

17. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ning (USPN 6,480,565 B1) as applied to claim 1 above, and further in view of Laurent et al. (USPN 4,964,147).

18. With respect to claim 5, Ning does not disclose the x-ray tube has a rotating anode, and wherein said plurality of components include an electrical actuator for said rotating anode. Laurent et al. disclose a rotating anode including an electrical actuator for rotating the anode (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a rotating anode and an electrical actuator for rotating the anode in the Ning x-ray tube, to prolong x-ray tube life, as taught by Laurent et al.

19. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ning (USPN 6,480,565 B1) as applied to claim 1 above, and further in view of Abdel-Malek (USPN 5,668,850).

20. With respect to claim 7, Ning does not disclose the digital control, regulation and storage unit contains a program, and operates according to said program, to determine at least one of wear of said x-ray tube and an expected remaining life of said x-ray tube. Abdel-Malek discloses a program to determine expected remaining life of an x-ray tube (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a program in Ning to determine expected remaining life of the x-ray tube, as taught by Abdel-Malek, to save time.

Response to Arguments

21. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jurie Yun whose telephone number is 571 272-2497. The examiner can normally be reached on Monday-Friday 8:30-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2882

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jurie Yun
December 5, 2005



EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER